

DECLARATION AND POWER OF ATTORNEY

I, VERNON R. SMITH, declare that I am a citizen of
the United States of America residing at Peoria, Illinois, and that
I believe I am one of the original, first, and joint inventors together with
Ronald D. Shinogle; Richard A. De Keyser; Stephen F. Glassey; and Yasser A.
Al-Charif, of the subject matter which is claimed and for which a patent is
sought on the invention entitled:

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL
INJECTOR, USING ELECTRONIC TRIMMING

the specification of which was filed in the United States Patent and
Trademark Office on the 28th day of May, 1999, as Application
No. 09/322,770.

I hereby state that I have reviewed and understand the contents of the
above identified specification, including the claims.

Every error in the patent which was corrected in the present reissue
application, and is not covered by a prior oath/declaration submitted in
this application, arose without any deceptive intention on the part of the
applicant.

I acknowledge the duty to disclose to the Patent and Trademark Office
all information known to be material to patentability as defined in §1.56.
I further declare that no application for patent or inventor's certificate
on this invention has been filed in any country foreign to the United States
of America prior to this application by me or my legal representatives or
assigns.

I hereby appoint Larry G. Cain, Patent Office Reg. No. 31,150,
telephone (309) 675-4922, Joseph W. Keen, Patent Office Reg. No. 28,432,
telephone (309) 675-5753, Robert J. Hampsch, Patent Office Reg. No. 36,155,
telephone (309) 675-5214, Kevin M. Kercher, Patent Office Reg. No. 33,408,
telephone (309) 675-4923, and R. Carl Wilbur, Patent Office Reg. No. 36,056,
telephone (309) 675-5847, my attorneys and/or agents, with full power of
substitution and revocation, to prosecute this application and to transact
all business in the Patent and Trademark Office connected with this
application. Please address all correspondence to Larry G. Cain,
Caterpillar Inc., Patent Department, AB6490, 100 N.E. Adams Street, Peoria,
Illinois 61629-6490.

I hereby declare that all statements made herein of my own knowledge
are true and that all statements made on information and belief are believed
to be true; and further that these statements are made with the knowledge
that willful false statements and the like so made are punishable by fine or
imprisonment, or both, under Section 1001 of Title 18 of the United States
Code and that such willful false statements may jeopardize the validity of
the application or any patent issued thereon.

Vernon R. Smith 10/16/99
VERNON R. SMITH Date
Post Office Address: 708 E. Mossville Rd.
Peoria, Illinois 61615



DECLARATION AND POWER OF ATTORNEY

I, STEPHEN F. GLASSEY, declare that I am a citizen of the United States of America residing at Gulnare, Colorado, and that I believe I am one of the original, first, and joint inventors together with Ronald D. Shinogle; Vernon R. Smith; Richard A. De Keyser; and Yasser A. Al-Charif, of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL INJECTOR, USING ELECTRONIC TRIMMING

the specification of which was filed in the United States Patent and Trademark Office on the 28th day of May, 1999, as Application No. 09/322,770.

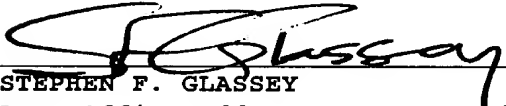
I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to be material to patentability as defined in §1.56. I further declare that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns.

I hereby appoint Larry G. Cain, Patent Office Reg. No. 31,150, telephone (309) 675-4922, Joseph W. Keen, Patent Office Reg. No. 28,432, telephone (309) 675-5753, Robert J. Hampsch, Patent Office Reg. No. 36,155, telephone (309) 675-5214, Kevin M. Kercher, Patent Office Reg. No. 33,408, telephone (309) 675-4923, and R. Carl Wilbur, Patent Office Reg. No. 36,056, telephone (309) 675-5847, my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490, 100 N.E. Adams Street, Peoria, Illinois 61629-6490.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


 STEPHEN F. GLASSEY
 Post Office Address: 21750 Spirit Mountain Dr.
 Gulnare, Colorado 81042

10/15/99
 Date



DECLARATION AND POWER OF ATTORNEY

I, **YASSER A. ~~AB~~ CHARIF**, declare that I am a citizen of the United States of America residing at Farmington, Michigan, and that I believe I am one of the original, first, and joint inventors together with Ronald D. Shinogle, Vernon R. Smith, Richard A. De Keyser, and Stephen F. Glassey, of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL INJECTOR, USING ELECTRONIC TRIMMING

the specification of which was filed in the United States Patent and Trademark Office on the 28th day of May, 1999, as Application No. 09/322,770.

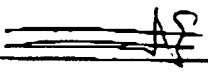
I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to be material to patentability as defined in §1.56. I further declare that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns.

I hereby appoint Larry G. Cain, Patent Office Reg. No. 31,150, telephone (309) 675-4922, Joseph W. Keen, Patent Office Reg. No. 28,432, telephone (309) 675-5753, Robert J. Hampsch, Patent Office Reg. No. 36,155, telephone (309) 675-5214, Kevin M. Kercher, Patent Office Reg. No. 33,408, telephone (309) 675-4923, and R. Carl Wilbur, Patent Office Reg. No. 36,056, telephone (309) 675-5847, my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490, 100 N.E. Adams Street, Peoria, Illinois 61629-6490.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Yasser Charif 
YASSER A. ~~AB~~ CHARIF Date 10/28/1999
Post Office Address: 37655 Blossom Lane
Farmington, Michigan 48331

W:115

DECLARATION AND POWER OF ATTORNEY

RONALD D. SHINOGLLE, declare that I am a citizen of the United States of America residing at Peoria, Illinois, and that I believe I am one of the original, first, and joint inventors together with Vernon R. Smith; Richard A. De Keyser; Stephen F. Glassey; and Yasser A. Al-Charif, of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL INJECTOR, USING ELECTRONIC TRIMMING

the specification of which was filed in the United States Patent and Trademark Office on the 28th day of May, 1999, as Application No. 09/322,770.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to be material to patentability as defined in §1.56. I further declare that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns.

I hereby appoint Larry G. Cain, Patent Office Reg. No. 31,150, telephone (309) 675-4922, Joseph W. Keen, Patent Office Reg. No. 28,432, telephone (309) 675-5753, Robert J. Hampsch, Patent Office Reg. No. 36,155, telephone (309) 675-5214, Kevin M. Kercher, Patent Office Reg. No. 33,408, telephone (309) 675-4923, and R. Carl Wilbur, Patent Office Reg. No. 36,056, telephone (309) 675-5847, my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490, 100 N.E. Adams Street, Peoria, Illinois 61629-6490.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Ronald D. Shingole

RONALD D. SHINOGLLE

Oct 11, 1999

Date

Post Office Address: 1023 W. Centennial Dr.
Peoria, Illinois 61614

DECLARATION AND POWER OF ATTORNEY

RICHARD A. DE KEYSER, declare that I am a citizen of the United States of America residing at Edelstein, Illinois, and that I believe I am one of the original, first, and joint inventors together with Ronald D. Shinogle; Vernon R. Smith; Stephen F. Glassey; and Yasser A. Al-Charif, of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL
INJECTOR, USING ELECTRONIC TRIMMING

the specification of which was filed in the United States Patent and Trademark Office on the 28th day of May, 1999, as Application No. 09/322,770.


I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to be material to patentability as defined in §1.56. I further declare that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns.

I hereby appoint Larry G. Cain, Patent Office Reg. No. 31,150, telephone (309) 675-4922, Joseph W. Keen, Patent Office Reg. No. 28,432, telephone (309) 675-5753, Robert J. Hampsch, Patent Office Reg. No. 36,155, telephone (309) 675-5214, Kevin M. Kercher, Patent Office Reg. No. 33,408, telephone (309) 675-4923, and R. Carl Wilbur, Patent Office Reg. No. 36,056, telephone (309) 675-5847, my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490, 100 N.E. Adams Street, Peoria, Illinois 61629-6490.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


RICHARD A. DE KEYSER
Post Office Address: 614 Horseshoe Tr.
Edelstein, Illinois 61526

OCT 7, 1999
Date